

1 Answer questions (1) ~ (5).

(1) Choose the sentence that best represents the overall purpose of the following passage.

Public transport is important in our lives. We use it to go to work, visit friends, go sightseeing and go about our daily business. In many countries, trains, buses and subways are expensive. Germany has launched a scheme to make getting around easier. Transport companies have created the Germany Ticket. This allows people to use local and regional transportation across the country for just 49 euros (\$54) a month. The ticket is valid for all public transport in Germany except long-distance intercity trains. More than three million tickets sold on the day of the launch.

The new Germany Ticket will be good for the environment. People will leave their cars at home and use environmentally-friendly trains and buses. Germany's Chancellor\* welcomed the new ticket. He said "this easy and cheap offer will make public transit more attractive and help us to achieve our climate goals". Germany aims to be carbon neutral by 2050. A transportation analyst said: "We need a scheme that puts rail before road and get passengers onto trains and buses". Other countries in Europe may also start a similar ticket.

注) \*Germany's Chancellor: ドイツの首相

- a. The passage explains how one country is trying to get people to take trains rather than buses.
- b. The passage explains how one country is trying to make public transportation easier to use.
- c. The passage explains how one country is trying to save money on public transportation.
- d. The passage explains how one country is trying to upgrade their long-distance trains.

(2) Choose the sentence that makes the best summary for the following passage.

Birth rates are falling to alarmingly low levels. Japan and South Korea are worrying about their future economic viability\*. A conference in Italy has addressed Italy's upcoming demographic\* crisis. Italy has one of the world's lowest birth rates. There will be considerable strains on pensions and the welfare system as the population ages. The head of the Catholic Church, Pope Francis, has warned that having children is becoming unaffordable for many couples. He said starting a family is a "titanic effort" that only the rich can afford.

The Pope encouraged Italians to have more children. He cautioned couples for making "selfish, egotistical\*" choices that result in lower birth rates. He said this is threatening Italy's economic future. He said there was a "demographic winter". Italy saw a record low number of births last year (392,000) and an elevated\* number of deaths (713,000). The Pope urged couples to have babies instead of pets. The BBC said Italy is often dubbed\* as "the country of empty cribs\*". It quoted Elon Musk as tweeting\* that: "Italy is disappearing. "

- 注)      \*viability: possibility  
           \*demographic: data relating parts of a total population  
           \*egotistical: self-centered  
           \*elevated: raised  
           \*dubbed: given a name in a critical way  
           \*cribs: small beds for babies  
           \*tweeting: sending a message using the X social media service (formerly Twitter)

- a. Certain countries may struggle to survive if their birth rates continue to fall.
- b. Pension systems will improve with an elevated number of deaths.
- c. The low number of births is related to the number of pet owners.
- d. The number of births needs to be equal to the number of deaths.

(3) Choose the sentence that best fits the blank.

\_\_\_\_\_ In the first quarter of 2023, it overtook car-making giants Japan and Germany. Chinese manufacturers exported more than 1.06 million vehicles in the first three months of 2023. They overtook Japan's number of 1.05 million. China's car industry has advanced a lot. Throughout the 2010s, it produced around a million cars a year. That doubled to two million in 2021 and then to three million in 2022. China is forecast to quadruple\* production from four years ago to be the world's largest auto exporter.

China is also leading the way in electric vehicles (EVs). Tesla\* has a giant "Gigafactory\*" in China. It has a capacity of 1.25 million vehicles a year, but is yet to make that amount. The factory exports many cars to Canada, Europe and Japan. Tesla is about to lose its crown\* as the world's largest EV maker to China's BYD\*. Last month, BYD launched a compact EV with a starting price of \$11,000. The top country China exports cars to is Russia. Exports to Russia have been boosted\* by Western countries putting trade sanctions\* on Moscow.

- 注)
- \*quadruple: increase four times
  - \*Tesla: the name of a company
  - \*Gigafactory: a large factory
  - \*crown: top position
  - \*BYD: the name of a company
  - \*boosted: increased
  - \*sanctions: orders to limit trade

- a. China is about to lose its position as the world's largest vehicle exporter.
- b. China's export of vehicles is starting to slow down.
- c. China will build a huge new factory to compete with Tesla.
- d. China will soon be the largest vehicle exporter for the first time.

(4) Choose the sentence that best represents the main idea of the following passage.

Elon Musk’s brain implant\* company Neuralink says it’s gotten permission from U.S. regulators to begin testing its device in people. The company made the announcement on Twitter\* Thursday evening but has provided no details about a potential study, which was not listed on the U.S. government database of clinical trials\*. Officials with the Food and Drug Administration wouldn’t confirm or deny whether the agency granted the approval, but press officer Carly Kempner said in an email that the FDA\* “acknowledges and understands” that Musk’s company made the announcement. Neuralink is one of many groups working on linking the nervous system to computers. The aim is to put into humans a neural-chip\* implant designed to decode and stimulate brain activity. Earlier this week, for example, researchers in Switzerland published research in the journal *Nature* describing an implant that restores communication between the brain and spinal cord\* to help a man with paralysis\* to stand and walk naturally. There are more than 30 brain or spine computer interface trials underway, according to clinicaltrials.gov. Musk – who also owns Twitter and is the CEO of Tesla and SpaceX – said last December that his team was in the process of asking regulators to allow them to test the Neuralink device.

- 注)      \*implant: something inserted into a person’s body  
           \*Twitter: a social media platform  
           \*clinical trials: medical research studies  
           \*FDA: Food and Drug Administration  
           \*neural-chip: a microprocessor that can interact with a human brain  
           \*spinal cord: the collection of nerves that connects all parts of the body to the brain  
           \*paralysis: the loss of the ability to move

- a. Brain implants help people who can’t walk become more mobile.
- b. Many people are worried that brain implants may be misused in the future.
- c. Neuralink announced that they can start testing a new brain implant device.
- d. Neuralink is the only company conducting studies on brain implants.

(5) What is the author suggesting in the underlined sentence?

Scientists on an oceanographic\* voyage in the Central North Pacific last August became startled\* about the number of manmade objects littering\* the ocean surface. [Far from civilization and shipping lanes], they recorded 53 manmade objects in 8.2 hours of viewing. More than half were plastic. They go on to compute that there are between 5 million and 35 million plastic bottles adrift\* in the North Pacific. The Great Pacific Garbage Patch is larger now than it was in 1973, containing an estimated 1.8 trillion pieces of plastic within an area twice the size of Texas. In recent years, marine biologists have started seeing evidence that garbage is disrupting ocean ecosystems. For instance, large pieces of trash have helped species cross into new territories. But an even greater threat may lurk\* beneath the waves. Tiny bits of plastic concentrate hundreds of meters deep where they can be eaten by filter feeders\* and potentially make their way into the guts\* of larger predators\*.

注) \*oceanographic: related to the study of the ocean

\*startled: surprised

\*littering: making a mess of

\*adrift: floating

\*lurk: wait secretly

\*filter feeders: animals that feed by filtering food from the ocean

\*guts: stomachs

\*predators: animals that naturally attack and eat others

- a. Larger fish are mainly eating tiny pieces of plastic.
- b. Some ecosystems are improving because of tiny pieces of plastic.
- c. The Great Pacific Garbage Patch continues to expand at an alarming rate.
- d. The plastic underwater may be more dangerous than the plastic on the surface.

[出典]

- (1) “The Reading/Listening-Germany Ticket-Level 2”, Breaking News English,  
<https://breakingnewsenglish.com/2305/230504-germany-ticket-2.html>
- (2) “The Reading/Listening-Children and Pets-Level 5”, Breaking News English,  
<https://breakingnewsenglish.com/2305/230515-children-and-pets-5.html>
- (3) “The Reading/Listening-Chinese Cars-Level 5”, Breaking News English,  
<https://breakingnewsenglish.com/2305/230522-chinese-car-companies-5.html>, ※一部改
- (4) “Elon Musk’s Brain Implant Company Says It Has Approval to Begin Human Trials”,  
Associated Press, May 26, 2023, Voice of America,  
<https://www.voanews.com/a/elon-musk-s-brain-implant-company-says-it-has-approval-to-begin-human-trials-7111590.html>
- (5) “50 years ago, scientists discovered the Great Pacific Garbage Patch”, Demian Perry,  
February 16, 2023, Science News,  
<https://www.sciencenews.org/article/50-years-ago-ocean-plastic-great-pacific-garbage-patch>

2 Read the following article and answer questions (1) ~ (5).

[1] A major meeting of computer hackers planned for this summer is to include an event that will test the limits of artificial intelligence (AI) tools. The event, in August, will be held as part of the yearly DEF CON hacker meeting in Las Vegas, Nevada. In addition to hackers, the gathering draws computer security experts, students, federal government officials and others. Organizers say this year's event is expected to include thousands of hackers. The meeting provides a chance for hackers to hear from leading industry officials about the latest developments in computer security. It also includes hacking competitions.

[2] This year, several major AI developers will take part in DEF CON. Among them will be OpenAI, which launched its latest AI model, ChatGPT-4, in March. American software maker Microsoft has invested heavily in OpenAI. Google also released an AI system called Bard earlier this year.

[3] The administration of President Joe Biden has said it will support the hacking event as part of efforts to study the latest AI tools. Administration officials said the government is aiming to ensure that the fast-developing systems will continue to improve without putting people's rights and safety at risk.

[4] Recently released AI tools are built by feeding huge amounts of information into machine learning computer systems. The data trains the AI systems to develop complex skills and produce human-like results. Experts have warned that such systems may bring major changes to many different jobs and industries. They also fear the tools, known as "chatbots," could greatly increase the amount of misinformation in the news media and on social media.

[5] Organizers of the DEF CON event say some of the questions attendees will try to answer include: How can chatbots be changed by hackers to cause harm? Will they share private data meant to be secret with other users? And why do the systems get easily confused when processing information about gender and race? "This is why we need thousands of people," Rumman Chowdhury told The Associated Press. She is an organizer of the hacking event and co-founder of AI accountability\* nonprofit *Humane Intelligence*.

[6] Chowdhury added, "We need a lot of people with a wide range of lived experiences, subject matter expertise and backgrounds hacking at these models and trying to find problems that can then go be fixed." Chowdhury said results of the event can provide helpful information to companies looking at ways to safely use the fast-developing AI systems. She noted that the hackers' work will not end after the gathering. They will spend months afterward creating reports on their findings and identifying specific system vulnerabilities\*.

[7] Alexandr Wang is the chief executive of AI developer Scale AI. He told the AP\*, “As these foundation models become more and more widespread, it’s really critical that we do everything we can to ensure their safety.” Wang said he especially worries about chatbots giving out “unbelievably bad medical advice” or other misinformation that can cause serious harm.

[8] Jack Clark is the co-founder of AI developer Anthropic. He said he hopes the DEF CON event will lead to deeper commitments from AI developers to measure and test the safety of their systems. For this to happen, though, Clark said AI systems will need to be examined by third parties both before and after deployment. “We need to get practice at figuring out how to do this. It hasn’t really been done before,” he said.

[出典]

“Computer Hackers to Test Limits of AI Tools at Las Vegas Meeting”, May 24, 2023, Voice of America Learning English, [learningenglish.voanews.com](https://learningenglish.voanews.com/a/computer-hackers-to-test-limits-of-ai-tools-at-las-vegas-meeting/7088665.html),  
<https://learningenglish.voanews.com/a/computer-hackers-to-test-limits-of-ai-tools-at-las-vegas-meeting/7088665.html>

注) \*accountability: taking responsibility for your actions

\*vulnerabilities: weaknesses

\*the AP: the Associated Press

(1) Which paragraph explains how AI systems could be checked for safety concerns?

- a. Paragraph 1
- b. Paragraph 2
- c. Paragraph 5
- d. Paragraph 8

(2) Which paragraph mentions the companies that will join DEF CON this year?

- a. Paragraph 1
- b. Paragraph 2
- c. Paragraph 3
- d. Paragraph 5

- (3) Which paragraph gives a brief explanation of how AI tools are trained?
- a. Paragraph 2
  - b. Paragraph 4
  - c. Paragraph 6
  - d. Paragraph 8
- (4) Why is President Joe Biden's administration interested in supporting the event explained in this article?
- a. To ensure that it can make money from AI systems.
  - b. To find out how to hack computer systems of other countries.
  - c. To identify dangerous hackers.
  - d. To make sure that AI systems are not harming people.
- (5) What is the main idea of this article?
- a. To demonstrate how governments are using AI.
  - b. To explain how one country is trying to ban AI.
  - c. To provide information about an upcoming AI event.
  - d. To support an opinion that AI is dangerous.



3 次の英文の要旨を、句読点も含め 100 字以内の日本語でまとめ、解答欄に書きなさい。

著作権の関係で問題文は掲載できません。

[出典]

“Study warns Great Lakes in worse shape than thought from chemicals”, Keith Matheny, October 2, 2013, Newsela,  
<https://newsela.com/view/ck9noo9a9006q0iqj72yq5onw/?levelId=ck7ectvz100x414p7r134nbw>

注) \*The Great Lakes: 五大湖

\*PPCPs\*: 医療品・生活関連物質

\*2 quadrillion, or 2,000 trillion, gallons: a very large amount

\*diabetes: 糖尿病

\*hormone: ホルモン

4 Read the passage, and explain the main point in your own words. Write your answer in English within 30 words.

To embrace equality is to believe that no one person is more valuable than any other. As Nelson Mandela said, “The world’s problems begin with the notion that some lives are more valuable than others” (Hatang & Venter, 2011). However, this doesn’t mean that everyone should be treated the same. People are as unique as their fingerprints, with their own individual sets of strengths, needs, characteristics, and histories, so it would be unfair and ineffective to treat them interchangeably\*. Indeed, if we work from the belief that everyone is equally valuable, we should feel compelled\* to support policies and practices that differentiate\* for each person.

[出典]

Jim Knight. *The Definitive Guide to Instructional Coaching: Seven Factors for Success*. ASCD, 2021, pp20-21.

注) \*interchangeably: as though they can be exchanged

\*compelled: forced

\*differentiate: identify differences

5 Describe the picture below in English within 50 words.



- 6 Do you agree or disagree with the following statement? Write your answer in English within 50 words.

Children should be allowed to use smartphones at school.